

September 13, 1997

**Texaco Exploration & Production Inc.** P. O. Box 3109 Midland, Texas 79702 Attention: C. Wade Howard

> Administrative Order DD-198 & Administrative Order NSL-3867(SD)

Dear Mr. Howard:

Reference is made to your application dated June 19, 1997 for authorization to: (i) further develop the Vacuum-Abo Reef Pool underlying an existing standard 40-acre oil spacing and proration unit comprising the NW/4 NE/4 (Unit B) of Section 7, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico with its proposed State "AN" Well No. 11 (API No. 30-025-34097) at an unorthodox oil well location 900 feet from the North line and 1440 feet from the East line of said Section 7; and, (ii) with the same wellbore directional drill to a standard subsurface oil well location within the NE/4 NE/4 (Unit A) of said Section 7, being a standard 40-acre oil spacing and proration unit, in order to test the Undesignated Vacuum-Atoka Pool.

#### The Division Director Finds That:

- **(1)** The application has been duly filed under the provisions of:
  - Rule 111.D and E of the General Rules and (a) Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10388, issued by the Oil Conservation Commission in Case 11274 on June 13, 1995; and,
  - **(b)** Rule 104.F of said Division general rules;
- **(2)** The current pool boundaries in Lea County, New Mexico for the:
  - Vacuum-Atoka Pool comprises the E/2 of Section 36, Township 17 South, Range 34 East, NMPM and the NE/4 of Section 1, Township 18 South, Range 34 East, NMPM: and.
  - Vacuum-Abo Reef Pool includes the following **(b)** described area:

Administrative Order DD-198 & Administrative Order NSL-3867(SD) Texaco Exploration & Production Inc. September 13, 1997 Page 2

## TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM

Section 24:

SE/4

Sections 25 and 26:

All

Section 27:

S/2 SW/4 and SE/4

Section 33:

S/2 NE/4, S/2 SW/4, and SE/4

Sections 34 and 35:

All

Section 36:

SW/4 NW/4 and SW/4

## TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM

Section 18:

**S/2** 

Section 19:

N/2 NW/4, SW/4 NW/4, and W/2 SW/4

## TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM

Section 1:

SE/4

Section 1:

S/2 SW/4 and SE/4

Section 3:

S/2 SE/4

Section 10:

NE/4

Section 11:

N/2 and SE/4

0 .. 10

Section 12:

All

## TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM

Section 2:

NE/4

Section 3:

W/2 NW/4

Section 4:

N/2 and SW/4

Section 5:

All

Section 6:

SE/4 NE/4 and S/2

Sections 7 and 8:

All

Section 9:

SW/4

Section 17:

NW/4;

- (3) Both the Vacuum-Abo Reef and Vacuum-Atoka Pools are subject to the statewide rules and regulations, as promulgated by Rule 104.C(1)(a), which provides for 40-acre oil spacing and proration units, or drilling units, and requires that wells be located no closer than 330 feet to the outer boundary of a single 40-acre oil spacing and proration unit;
- (4) Division records and the application indicate that the State "AN" lease (New Mexico State Lease No. E-07653) comprises an area that includes the E/2 of said Section 7 and is operated by Texaco; therefore, there is no affected offsetting operator other than Texaco to the north of the proposed project area;
- (5) Within the NE/4 of said Section 7 Texaco is currently developing the Vacuum-Abo Reef Pool in the following manner:

- (a) the NE/4 NE/4 (Unit A) of said Section 7, being a standard 40-acre oil spacing and proration unit, is dedicated to Texaco's State "AN" Well No. 1 (API No. 30-025-03101), located at a standard oil well location 330 feet from the North line and 990 feet from the East line of said Section 7;
- (b) the NW/4 NE/4 (Unit B) of said Section 7, being a standard 40-acre oil spacing and proration unit, is dedicated to Texaco's State "AN" Well No. 2 (API No. 30-025-03102), located at a standard oil well location 330 feet from the North line and 2100 feet from the East line of said Section 7;
- (c) the SW/4 NE/4 (Unit G) of said Section 7, being a standard 40-acre oil spacing and proration unit, is dedicated to Texaco's State "AN" Well No. 3 (API No. 30-025-03103), located at a standard oil well location 1650 feet from the North line and 2310 feet from the East line of said Section 7; and,
- (d) the SE/4 NE/4 (Unit H) of said Section 7, being a standard 40-acre oil spacing and proration unit, is dedicated to Texaco's State "AN" Well No. 4 (API No. 30-025-03104), located at a standard oil well location 1650 feet from the North line and 990 feet from the East line of said Section 7:
- (6) The proposed "infill well" location in Unit "B" of said Section 7 (to be approximately 900 feet from the North line and 1400 feet from the East line) within the Vacuum-Abo Reef Pool, being of equidistance to all four of the above-described producing oil wells, will enable Texaco to further develop and deplete the reserves within the NE/4 of said Section 7, while the directionally drilling of this well in a conventional manner into the Undesignated Vacuum-Atoka Pool to a proposed standard bottomhole location within the NE/4 NE/4 (Unit A) of said Section 7 should enable Texaco to utilize fully the same wellbore in order to test the Atoka interval for oil production;
- (7) It is Texaco's intent to directionally drill the State "AN" Well No. 11 to an unorthodox surface oil well location 900 feet from the North line and 1440 feet from the East line (Unit B) of said Section 7 by drilling vertically to an approximate depth of 8,000 feet (the top of the Abo Reef within said well is expected to be at approximately 8326 feet), kick-off in a east-northeasterly direction building angle at a rate of 2 degrees per 100 feet until an inclination of 20 degrees is obtained, and drill directionally at a 20-degree angle to a

Administrative Order DD-198 & Administrative Order NSL-3867(SD) Texaco Exploration & Production Inc. September 13, 1997 Page 4

targeted standard bottomhole oil well location within the Atoka formation that is approximately 400 feet from the North line and 500 feet from the East line (Unit A) of said Section 7;

- (8) The "project area" within the Undesignated Vacuum-Atoka Pool proposed by Texaco would consist of a single standard 40-acre oil spacing and proration unit comprising the NW/4 NE/4 of said Section 7 and the applicable drilling window or "producing area" for said wellbore should include that area within the NW/4 NE/4 (Unit A) of said Section 7 that is no closer than 330 feet to the outer boundary of said dedicated 40-acre tract; and,
- (9) It appearing the applicant has satisfied all of the appropriate requirements prescribed in said Rule 111.D and E and 104.F(2), the subject application should be approved and the well should be governed by the provisions contained within this order and all other applicable provisions of Division General Rule 111.

## IT IS THEREFORE ORDERED THAT:

(1) Texaco Exploration and Production, Inc. ("Texaco") is hereby authorized to drill its proposed State "AN" Well No. 11 (API No. 30-025-34097) at an unorthodox surface oil well location 900 feet from the North line and 1440 feet from the East line (Unit B) of Section 7, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico, drill vertically to an approximate depth of 8,000 feet, kick-off in a east-northeasterly direction building angle at a rate of 2 degrees per 100 feet until an inclination of 20 degrees is obtained, penetrating the Abo Reef interval at an approximate 8326 feet, and continue to drill directionally to a targeted standard bottomhole oil well location within the Atoka formation that is approximately 400 feet from the North line and 500 feet from the East line (Unit A) of said Section 7.

<u>PROVIDED HOWEVER THAT</u> prior to commencing directional drilling operations in said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

PROVIDED FURTHER THAT during or upon completion of said directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

- (2) The applicant shall notify the supervisor of the Hobbs District office of the Division of the date and time said wellbore surveys are to be conducted so that they may be witnessed. The applicant shall further provide a copy of said wellbore surveys to the Santa Fe and Hobbs offices of the Division upon completion.
- (3) For the Vacuum-Abo Reef Pool the existing standard 40-acre oil spacing and proration unit comprising the NW/4 NE/4 (Unit B) of said Section 7, which is presently dedicated to Texaco's State "AN" Well No. 2 (API No. 30-025-03102), located at a standard oil well location 330 feet from the North line and 2100 feet from the East line of said Section 7, and said State "AN" Well No. 11 are both to be

Administrative Order DD-198 & Administrative Order NSL-3867(SD)
Texaco Exploration & Production Inc.
September 13, 1997
Page 5

dedicated to said well.

- (4) Further, Texaco is hereby: (i) authorized to simultaneously dedicate Vacuum-Abo Reef oil production from the existing State "AN" Well No. 2 with the proposed State "AN" Well No. 11; and, (ii) permitted to produce the allowable assigned the subject standard 40-acre oil spacing and proration unit from both wells in any proportion.
- (5) For the deeper Undesignated Vacuum-Atoka Pool the "project area" for the directionally drilled portion of the State "AN" Well No. 11 is to be a standard 40-acre oil spacing and proration unit comprising the NE/4 (Unit A) of said Section 7.
- (6) The applicable drilling window or "producing area" in the Undesignated Vacuum-Atoka Pool for said State "AN" Well No. 11 shall consist of that area within the NE/4 NE/4 (Unit A) of said Section 7 that is no closer than 330 feet to the outer boundary of said dedicated 40-acre tract.
- (7) The operator shall comply with all requirements and conditions set forth in Division General Rule 111.E(2) and any applicable requirements in 111.D and F.
- (8) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth (TVD) in addition to measured vertical depth (MVD).
- (9) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

WILLIAM J. KEMAY

Director

SEAL

cc: Oil Conservation Division - Hobbs

New Mexico State Land Office - Santa Fe

OD-NSL.TEX

## September 13, 1997

Texaco Exploration & Production Inc. P. O. Box 3109
Midland, Texas 79702

Attention: C. Wade Howard

Administrative Order DD-\*\*\*
&
Administrative Order NSL-\*\*\*\*\*\*(SD)
3867

Dear Mr. Howard:

Reference is made to your application dated June 13, 1997 for authorization to: (i) further develop the Vacuum-Abo Reef Pool underlying an existing standard 40-acre oil spacing and proration unit comprising the NW/4 NE/4 (Unit B) of Section 7, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico with its proposed State "AN" Well No. 11 (API No. 30-025-34097) at an unorthodox oil well location 900 feet from the North line and 1440 feet from the East line of said Section 7; and, (ii) with the same wellbore directional drill to a standard subsurface oil well location within the NE/4 NE/4 (Unit A) of said Section 7, being a standard 40-acre oil spacing and proration unit, in order to test the Undesignated Vacuum-Atoka Pool.

## The Division Director Finds That:

- (1) The application has been duly filed under the provisions of:
  - (a) Rule 111.D and E of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10388, issued by the Oil Conservation Commission in Case 11,274 on June 13, 1995; and,
  - (b) Rule 104.F of said Division general rules;
- (2) The current pool boundaries in Lea County, New Mexico for the:

- (a) Vacuum-Atoka Pool comprises the E/2 of Section 36, Township 17 South, Range 34 East, NMPM and the NE/4 of Section 1, Township 18 South, Range 34 East, NMPM; and,
- (b) Vacuum-Abo Reef Pool includes the following described area:

## TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM

Section 24:

SE/4

Sections 25 and 26: All

Section 27:

S/2 SW/4 and SE/4

Section 33:

S/2 NE/4, S/2 SW/4, and SE/4

Sections 34 and 35: All

Section 36:

SW/4 NW/4 and SW/4

## TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM

Section 18:

**S/2** 

Section 19:

N/2 NW/4, SW/4 NW/4, and W/2 SW/4

## TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM

Section 1:

SE/4

Section 2:

S/2 SW/4 and SE/4

Section 3:

S/2 SE/4

Section 10:

NE/4

Section 11:

N/2 and SE/4

Section 12:

All

## TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM

Section 2:

NE/4

Section 3:

W/2 NW/4

Section 4:

N/2 and SW/4

Section 5:

All

Section 6:

SE/4 NE/4 and S/2

Sections 7 and 8:

All

Section 9:

SW/4

Section 17:

NW/4;

- Both the Vacuum-Abo Reef and Vacuum-Atoka Pools are subject to the statewide rules and regulations, as promulgated by Rule 104.C(1)(a), which provides for 40-acre oil spacing and proration units, or drilling units, and requires that wells be located no closer than 330 feet to the outer boundary of a single 40-acre oil spacing and proration unit;
- (4) Division records and the application indicate that the State "AN". lease (New Mexico State Lease No. E-07653) comprises an area that includes the E/2 of said

Section 7 and is operated by Texaco; therefore, there are no effected offsetting operator other than Texaco to the north of the proposed project area;

- (5) Within the NE/4 of said Section 7 Texaco is currently developing the Vacuum-Abo Reef Pool in the following manner:
  - (a) the NE/4 NE/4 (Unit A) of said Section 7, being a standard 40-acre oil spacing and proration unit, is dedicated to Texaco's State "AN" Well No. 1 (API No. 30-025-03101), located at a standard oil well location 330 feet from the North line and 990 feet from the East line of said Section 7;
  - (b) the NW/4 NE/4 (Unit B) of said Section 7, being a standard 40-acre oil spacing and proration unit, is dedicated to Texaco's State "AN" Well No. 2 (API No. 30-025-03102), located at a standard oil well location 330 feet from the North line and 2100 feet from the East line of said Section 7;
  - (c) the SW/4 NE/4 (Unit G) of said Section 7, being a standard 40-acre oil spacing and proration unit, is dedicated to Texaco's State "AN" Well No. 3 (API No. 30-025-03103), located at a standard oil well location 1650 feet from the North line and 2310 feet from the East line of said Section 7; and,
  - (d) the SE/4 NE/4 (Unit H) of said Section 7, being a standard 40-acre oil spacing and proration unit, is dedicated to Texaco's State "AN" Well No. 4 (API No. 30-025-03104), located at a standard oil well location 1650 feet from the North line and 990 feet from the East line of said Section 7;
- (6) The proposed "infill well" location in Unit "B" of said Section 7 (to be approximately 900 feet from the North line and 1400 feet from the East line) within the Vacuum-Abo Reef Pool, being of equidistance to all four of the above-described producing oil wells, will enable Texaco to further develop and deplete the reserves within the NE/4 of said Section 7, while the directionally drilling of this well in a conventional manner into the Undesignated Vacuum-Atoka Pool to a proposed standard bottomhole location within the NE/4 NE/4 (Unit A) of said Section 7 should enable Texaco to utilize fully the same wellbore in order to test the Atoka interval for oil production;
- (7) It is Texaco's intent to directionally drill the State "AN" Well No. 11 to an unorthodox surface oil well location 900 feet from the North line and 1440 feet

from the East line (Unit B) of said Section 7 by drilling vertically to an approximate depth of 8,000 feet (the top of the Abo Reef within said well is expected to be at approximately 8326 feet), kick-off in a east-northeasterly direction building angle at a rate of 2 degrees per 100 feet until an inclination of 20 degrees is obtained, and drill directionally at a 20 degree angle to a targeted standard bottomhole oil well location within the Atoka formation that is approximately 400 feet from the North line and 500 feet from the East line (Unit A) of said Section 7;

- (8) The "project area" within the Undesignated Vacuum-Atoka Pool proposed by Texaco would consist of a single standard 40-acre oil spacing and proration unit comprising the NW/4 NE/4 of said Section 7 and the applicable drilling window or "producing area" for said wellbore should include that area within the NW/4 NE/4 (Unit A) of said Section 7 that is no closer than 330 feet to the outer boundary of said dedicated 40-acre tract; and,
- (9) It appearing the applicant has satisfied all of the appropriate requirements prescribed in said Rule 111.D and E and 104.F(2), the subject application should be approved and the well should be governed by the provisions contained within this order and all other applicable provisions of Division General Rule 111.

## IT IS THEREFORE ORDERED THAT:

(1) Texaco Exploration and Production, Inc. ("Texaco") is hereby authorized to drill its proposed State "AN" Well No. 11 (API No. 30-025-34097) at an unorthodox surface oil well location 900 feet from the North line and 1440 feet from the East line (Unit B) of Section 7, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico, drill vertically to an approximate depth of 8,000 feet, kick-off in a east-northeasterly direction building angle at a rate of 2 degrees per 100 feet until an inclination of 20 degrees is obtained, penetrating the Abo Reef interval at an approximate 8326 feet, and continue to drill directionally to a targeted standard bottomhole oil well location within the Atoka formation that is approximately 400 feet from the North line and 500 feet from the East line (Unit A) of said Section 7.

<u>PROVIDED HOWEVER THAT</u> prior to commencing directional drilling operations in said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

<u>PROVIDED FURTHER THAT</u> during or upon completion of said directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

(2) The applicant shall notify the supervisor of the Hobbs District office of the Division of the date and time said wellbore surveys are to be conducted so that they may be

witnessed. The applicant shall further provide a copy of said wellbore surveys to the Santa Fe and Hobbs offices of the Division upon completion.

- (3) For the Vacuum-Abo Reef Pool the existing standard 40-acre oil spacing and proration unit comprising the NW/4 NE/4 (Unit B) of said Section 7, which is presently dedicated to Texaco's State "AN" Well No. 2 (API No. 30-025-03102), located at a standard oil well location 330 feet from the North line and 2100 feet from the East line of said Section 7, and said State "AN" Well No. 11 are both to be dedicated to said well.
- (4) Further, Texaco is hereby: (i) authorized to simultaneously dedicate Vacuum-Abo Reef oil production from the existing State "AN" Well No. 2 with the proposed State "AN" Well No. 11; and, (ii) permitted to produce the allowable assigned the subject standard 40-acre oil spacing and proration unit from both wells in any proportion.
- (5) For the deeper Undesignated Vacuum-Atoka Pool the "project area" for the directionally drilled portion of the State "AN" Well No. 11 is to be a standard 40-acre oil spacing and proration unit comprising the NE/4 NE/4 (Unit A) of said Section 7.
- (6) The applicable drilling window or "producing area" in the Undesignated Vacuum-Atoka Pool for said State "AN" Well No. 11 shall consist of that area within the NE/4 NE/4 (Unit A) of said Section 7 that is no closer than 330 feet to the outer boundary of said dedicated 40-acre tract.
- (7) The operator shall comply with all requirements and conditions set forth in **Division General Rule 111.E(2)** and any applicable requirements in **111.D** and **F**.
- (8) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth (TVD) in addition to measured depth (MVD).
- (9) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY Director

SEAL

cc: Oil Conservation Division - Hobbs
New Mexico State Land Office - Santa Fe

September 13, 1997 Texaco Exploration & Production Inc. P. O. Box 3109

Midland, Texas 79702

Attention: C. Wade Howard

Administrative Order DD-\*\*\* & Administrative Order NSL-\*\*\*\*\*(SD)

Dear Mr. Howard:

Reference is made to your application dated June 23, 1997 for authorization to: (i) further develop the Vacuum-Abo Reef Pool underlying an existing standard 40-acre oil spacing and proration unit comprising the NW/4 NE/4 (Unit B) of Section 7, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico with its proposed State "AN" Well No. 11 (API No. 30-025-34097) at an unorthodox oil well location 900 feet from the North line and 1440 feet from the East line of said Section 7; and, (ii) with the same wellbore directional drill to a standard subsurface oil well location within the NE/4 NE/4 (Unit A) of said Section 7, being a standard 40-acre oil spacing and proration unit, in order to test the Undesignated Vacuum-Atoka Pool.

## The Division Director Finds That:

- **(1)** The application has been duly filed under the provisions of:
  - Rule 111.D and E of the General Rules and (a) Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10388, issued by the Oil Conservation Commission in Case 11,274 on June 13, 1995; and,
  - **(b)** Rule 104.F of said Division general rules;
- **(2)** The current pool boundaries in Lea County, New Mexico for the:

- (a) Vacuum-Atoka Pool comprises the E/2 of Section 36, Township 17 South, Range 34 East, NMPM and the NE/4 of Section 1, Township 18 South, Range 34 East, NMPM; and,
  - (b) Vacuum-Abo Reef Pool includes the following described area:

## TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM

Section 24:

SE/4

Sections 25 and 26: All

Section 27:

S/2 SW/4 and SE/4

Section 33:

S/2 NE/4, S/2 SW/4, and SE/4

Sections 34 and 35: All

Section 36:

SW/4 NW/4 and SW/4

## TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM

Section 18:

**S/2** 

Section 19:

N/2 NW/4, SW/4 NW/4, and W/2 SW/4

## TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM

Section 1:

SE/4

Section 2:

S/2 SW/4 and SE/4

Section 3:

S/2 SE/4

Section 3.

NE/4

Section 11:

N/2 and SE/4

Section 12:

All

## TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM

Section 2:

NE/4

Section 3:

W/2 NW/4

Section 4:

N/2 and SW/4

Section 5:

All

Section 6:

SE/4 NE/4 and S/2

Sections 7 and 8:

All

Section 9:

**SW/4** 

Section 17:

NW/4;

- (3) Both the Vacuum-Abo Reef and Vacuum-Atoka Pools are subject to the statewide rules and regulations, as promulgated by Rule 104.C(1)(a), which provides for 40-acre oil spacing and proration units, or drilling units, and requires that wells be located no closer than 330 feet to the outer boundary of a single 40-acre oil spacing and proration unit;
- (4) Division records and the application indicate that the State "AN" lease (New Mexico State Lease No. E-07653) comprises an area that includes the E/2 of said

Section 7 and is operated by Texaco; therefore, there are no effected offsetting operator other than Texaco to the north of the proposed project area;

- (5) Within the NE/4 of said Section 7 Texaco is currently developing the Vacuum-Abo Reef Pool in the following manner:
  - (a) the NE/4 NE/4 (Unit A) of said Section 7, being a standard 40-acre oil spacing and proration unit, is dedicated to Texaco's State "AN" Well No. 1 (API No. 30-025-03101), located at a standard oil well location 330 feet from the North line and 990 feet from the East line of said Section 7:
  - (b) the NW/4 NE/4 (Unit B) of said Section 7, being a standard 40-acre oil spacing and proration unit, is dedicated to Texaco's State "AN" Well No. 2 (API No. 30-025-03102), located at a standard oil well location 330 feet from the North line and 2100 feet from the East line of said Section 7:
  - (c) the SW/4 NE/4 (Unit G) of said Section 7, being a standard 40-acre oil spacing and proration unit, is dedicated to Texaco's State "AN" Well No. 3 (API No. 30-025-03103), located at a standard oil well location 1650 feet from the North line and 2310 feet from the East line of said Section 7; and,
  - (d) the SE/4 NE/4 (Unit H) of said Section 7, being a standard 40-acre oil spacing and proration unit, is dedicated to Texaco's State "AN" Well No. 4 (API No. 30-025-03104), located at a standard oil well location 1650 feet from the North line and 990 feet from the East line of said Section 7;
- (6) The proposed "infill well" location in Unit "B" of said Section 7 (to be approximately 900 feet from the North line and 1400 feet from the East line) within the Vacuum-Abo Reef Pool, being of equidistance to all four of the above-described producing oil wells, will enable Texaco to further develop and deplete the reserves within the NE/4 of said Section 7, while the directionally drilling of this well in a conventional manner into the Undesignated Vacuum-Atoka Pool to a proposed standard bottomhole location within the NE/4 NE/4 (Unit A) of said Section 7 should enable Texaco to utilize fully the same wellbore in order to test the Atoka interval for oil production;
- (7) It is Texaco's intent to directionally drill the State "AN" Well No. 11 to an unorthodox surface oil well location 900 feet from the North line and 1440 feet

from the East line (Unit B) of said Section 7 by drilling vertically to an approximate depth of 8,000 feet (the top of the Abo Reef within said well is expected to be at approximately 8326 feet), kick-off in a east-northeasterly direction building angle at a rate of 2 degrees per 100 feet until an inclination of 20 degrees is obtained, and drill directionally at a 20 degree angle to a targeted standard bottomhole oil well location within the Atoka formation that is approximately 400 feet from the North line and 500 feet from the East line (Unit A) of said Section 7;

- (8) The "project area" within the Undesignated Vacuum-Atoka Pool proposed by Texaco would consist of a single standard 40-acre oil spacing and proration unit comprising the NW/4 NE/4 of said Section 7 and the applicable drilling window or "producing area" for said wellbore should include that area within the NW/4 NE/4 (Unit A) of said Section 7 that is no closer than 330 feet to the outer boundary of said dedicated 40-acre tract; and,
- (9) It appearing the applicant has satisfied all of the appropriate requirements prescribed in said Rule 111.D and E and 104.F(2), the subject application should be approved and the well should be governed by the provisions contained within this order and all other applicable provisions of Division General Rule 111.

## IT IS THEREFORE ORDERED THAT:

(1) Texaco Exploration and Production, Inc. ("Texaco") is hereby authorized to drill its proposed State "AN" Well No. 11 (API No. 30-025-34097) at an unorthodox surface oil well location 900 feet from the North line and 1440 feet from the East line (Unit B) of said Section 7, drill vertically to an approximate depth of 8,000 feet, kick-off in a east-northeasterly direction building angle at a rate of 2 degrees per 100 feet until an inclination of 20 degrees is obtained, penetrating the Abo Reef interval at an approximate 8326 feet, and continue to drill directionally to a targeted standard bottomhole oil well location within the Atoka formation that is approximately 400 feet from the North line and 500 feet from the East line (Unit A) of said Section 7.

<u>PROVIDED HOWEVER THAT</u> prior to commencing directional drilling operations in said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

<u>PROVIDED FURTHER THAT</u> during or upon completion of said directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

(2) The applicant shall notify the supervisor of the Hobbs District office of the Division of the date and time said wellbore surveys are to be conducted so that they may be

witnessed. The applicant shall further provide a copy of said wellbore surveys to the Santa Fe and Hobbs offices of the Division upon completion.

- (3) For the Vacuum-Abo Reef Pool the existing standard 40-acre oil spacing and proration unit comprising the NW/4 NE/4 (Unit B) of said Section 7, which is presently dedicated to Texaco's State "AN" Well No. 2 (API No. 30-025-03102), located at a standard oil well location 330 feet from the North line and 2100 feet from the East line of said Section 7, and said State "AN" Well No. 11 are both to be dedicated to said well.
- (4) Further, Texaco is hereby: (i) authorized to simultaneously dedicate Vacuum-Abo Reef oil production from the existing State "AN" Well No. 2 with the proposed State "AN" Well No. 11; and, (ii) permitted to produce the allowable assigned the subject standard 40-acre oil spacing and proration unit from both wells in any proportion.
- (5)—For the deeper Undesignated Vacuum-Atoka Pool the "project area" for the directionally drilled portion of the State "AN" Well No. 11 is to be a standard 40-acre oil spacing and proration unit-comprising the NE/4 NE/4 (Unit A) of said Section 7.
- (6) The applicable drilling window or "producing area" in the Undesignated Vacuum-Atoka Pool for said State "AN" Well No. 11 shall consist of that area within the NE/4 NE/4 (Unit A) of said Section 7 that is no closer than 330 feet to the outer boundary of said dedicated 40-acre tract.
- (7) The operator shall comply with all requirements and conditions set forth in Division General Rule 111.E(2) and any applicable requirements in 111.D and F.
- (8) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth (TVD) in addition to measured depths (MVD).
- (9) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

WILLIAM J. LEMAY Director

SEAL

cc: Oil Conservation Division - Hobbs
New Mexico State Land Office - Santa Fe



( su DD-TEX.3

Texaco Exploration and Production Inc

500 North Loraine Midland TX 79701 P O Box 3109 Midland TX 79702

June 19, 1997

GOV - STATE AND LOCAL GOVERNMENTS

Directional Drilling
State "AN" Well No. 11
Wildcat Atoka: Vacuum, Abo Reef Fields
Lea County, New Mexico

State of New Mexico Energy and Minerals Department Oil Conservation Division 2040 South Pacheco Santa Fe, New Mexico 87505

Attention: Mr. Michael E. Stogner

Gentlemen:

Administrative approval, Rule 111 D. is requested to directionally drill the captioned well to an outhorox bottomhole location in the Atoka. The Abo Reef will be an unorthodox location.

This well is being drilled as a vertical development well in the Abo Reef and must be directionally drilled to penetrate a prospective Atoka pay across a fault northeast of the surface location. Attached for your information is a copy of our directional plans, a type log secti

The "affected" offset operators to this well request (see attached offset operator's list a

Any questions concerning this request should 1 4606.

Yours very truly,

howood show ?

C. W. Howard
Engineer's Assistant

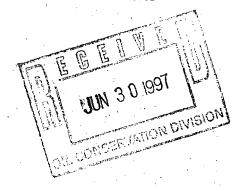
CWH:

CC: NMOCD, P. O. Box 1980, Hobbs, NM 88240

Attachments

- approve as a dir drill to a Standard commeler of Pool

- provide for the So last junterval to be authorised such last such la s



DISTRICT 1 P. O. Box 1980, Hobbs, NM 88240

DISTRICT II P. O. Drower DD, Artesio, NM 88210 DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410 DISTRICT IV P. O. Box 2088, Santa Fe, NM 87504-2088

State of New Mexico Energy, Minerals and Natural Resources Department

## OIL CONSERVATION DIVISION

PO Box 2088 Santa Fe, NM 87504-2088

Form C-102 Revised February 10, 1994

Instructions on back

Submit to Appropriate District Office

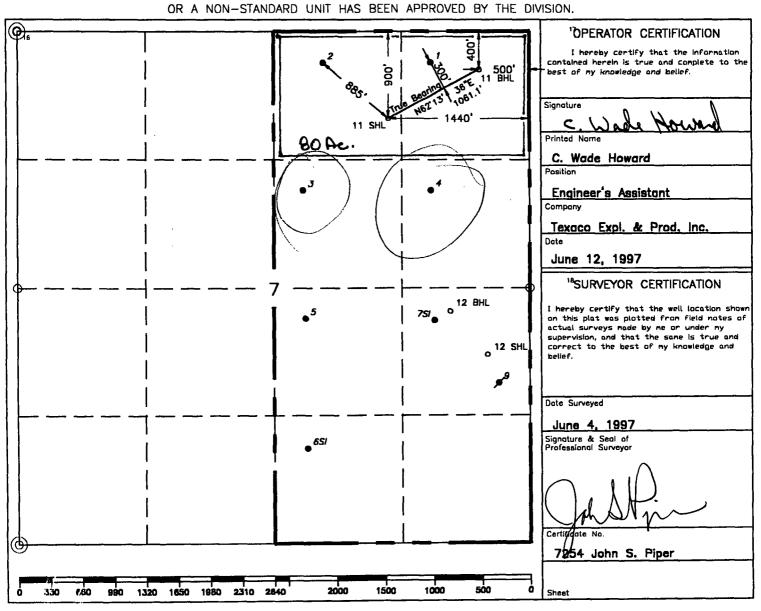
State Lease-4 copies Fee Lease-3 copies

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number			<sup>2</sup> Paol Code  Wildcat, Atoka; Vacuum, Abo Reef							
Property Code						<sup>5</sup> Well Number 11				
OGRID No. 22351				TEXACO	TEXACO EXPLORATION & PRODUCTION, INC.					
				<del></del>	10 Surface L	ocation		· · · · · · · · · · · · · · · · · · ·		
UL or lot no.	Section 7	Township 18-S	Range 35-E	Lat Idn	Feet from the 900°	North/South line North	Feet from the 1440°	East/West line <b>East</b>	County Lea	
			11 B	ottom Hol	e Location If	Different From	Surface			
UL or lot no.	Section 7	Township 18-S	Range 35-E	Lot Idn	Feet from the 400°	North/South line North	Feet from the 500°	East/West line <b>East</b>	7County Lea	
<sup>1</sup> Dedicated Acres <b>40</b>	13Joi	nt or Infill	1 Consolid	ation Cade	<sup>15</sup> Order No.		<u> </u>			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED



= Producing Well = Injection Well • = Water Supply Well • = Plugged & Abandon Well



## Texaco Exploration and Production Inc.

500 North Loraine Midland TX 79701

P O Box 3109 Midland TX 79702

June 19, 1997

GOV - STATE AND LOCAL GOVERNMENTS
Directional Drilling
State "AN" Well No. 11
Sec. 7, T-18-S, R-35-E
Lea County, New Mexico

## TO THE OFFSET OPERATORS

#### Gentlemen:

As an offset operator to the captioned lease, you are being furnished with a copy of our Application to directionally drill the captioned well. If you have no objection, please sign the waiver at the bottom of this letter and return in the enclosed envelope.

Any questions concerning this request should be directed to me at (915) 688-4606.

Yours very truly,

C. Wade Howard

C. W. Howard Engineer Assistant

DATE:

CWH: cwh

File

WAIVER APPROVED:

COMPANY:

BY:

## OFFSET OPERATOR'S LIST State "AN" Well No. 11 LEA COUNTY, NEW MEXICO

Texaco Exploration and Production Inc. P. O. Box 3109
Midland, Texas 79702

Marathon Oil Company P. O. Box 552 Midland, TX 79702

Shell Western E & P Inc. P. O. Box 576 Houston, TX 77001

Lynx Petroleum Consultants, Inc. P. O. Box 1666 Hobbs, NM 88241

Sun Operating Ltd. Partnership P. O. Box 2880 Dallas, TX 75221

Yates Petroleum Corporation Yates Drilling Company Abo Petroleum Corporation Myco Industries, Inc. 105 South 4TH St. Artesia, NM 88210

your RETURN ADDRESS completed on the reverse side?	SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.  Print your name and address on the reverse of this form so that we card to you.  Attach this form to the front of the mailplece, or on the back if space permit.  Write "Return Receipt Requested" on the mailpiece below the article The Return Receipt will show to whom the article was delivered and delivered.  3. Article Addressed to:  Marathon Oil Company  P. O. Box 552  Midland, Texas 79702  5. Received By: (Print Name)	ce does not  1.  Addressee's Address ele number.  2.  Restricted Delivery					
	X						
sı + ¿epi	PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.		Domestic Return Receipt  I also wish to receive the	,			
8 98	<ul> <li>Complete items 3, 4a, and 4b.</li> <li>Print your name and address on the reverse of this form so that we card to you.</li> </ul>	can return this	following services (for an extra fee):				
eve	<ul> <li>Attach this form to the front of the mailpiece, or on the back if space permit.</li> </ul>	e does not	1. Addressee's Address	<u> </u>			
를	<ul> <li>■Write "Return Receipt Requested" on the mailplece below the article.</li> <li>■The Return Receipt will show to whom the article was delivered an</li> </ul>		2. Restricted Delivery	200			
5	delivered.  3. Article Addressed to:	Ido Articlo N	Consult postmaster for fee.				
eted			4a. Article Number P 497 394 206				
Ē	Shell Western E & P Inc. P. Q. Box 576	4b. Service Type					
<u> </u>	Houston, Texas 77001-0576	☐ Registered XX Certified					
ESS		☐ Express Mail ☐ Insured					
		7. Date of Deliver UN 2 3 1997					
Ö		7 Data of Da		5			
N ADDF		7. Date of De	elivegun 23 1997	5			
<u>IETURN ADDRESS</u> completed on the reverse side?	5. Received By: (Print Name)		o'c Addross (Only if requested	idin yor ior using helum heceipt Service			
_	Received By: (Print Name)      Signature: (Addressee or Agent)	8. Addresse	e's Address (Only if requested	4			
Is your <u>RETURN ADD</u> R	6. Signature: (Addressee or Agent)  X & Burney	8. Addresse	e's Address (Only if requested paid)	4			
_	6. Signature: (Addressee or Agent)	8. Addresse	o'c Addross (Only if requested	4			
t is your BETU	6. Signature: (Addressee or Agent)  X B PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.	8. Addressee and fee is	Domestic Return Receipt  I also wish to receive the following services (for an extra fee):				
t is your BETU	6. Signature: (Addressee or Agent)  X B PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.	8. Addressee and fee is	Domestic Return Receipt  I also wish to receive the following services (for an extra fee):				
t is your BETU	6. Signature: (Addressee or Agent)  X B PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.	8. Addresses and fee is	Domestic Return Receipt  I also wish to receive the following services (for an extra fee):				
t is your BETU	6. Signature: (Addressee or Agent)  X B PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.	8. Addressee and fee is we can return this ace does not icle number. and the date	Domestic Return Receipt  I also wish to receive the following services (for an extra fee):				
t is your BETU	6. Signature: (Addressee or Agent)  X B PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.	8. Addresses and fee is we can return this ace does not ide number, and the date	Domestic Return Receipt  I also wish to receive the following services (for an extra fee):				
t is your BETU	6. Signature: (Addressee or Agent)  X B PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.	8. Addresses and fee is we can return this ace does not ide number, and the date	Domestic Return Receipt  I also wish to receive the following services (for an extra fee):				
t is your BETU	6. Signature: (Addressee or Agent)  X B PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.	8. Addresses and fee is we can return this ace does not ide number, and the date	Domestic Return Receipt  I also wish to receive the following services (for an extra fee):				
t is your BETU	6. Signature: (Addressee or Agent)  X B PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.	8. Addressee and fee is and fee is and fee is and fee is 4a. Article 4a. Article 4b. Service Registe Express	Domestic Return Receipt  I also wish to receive the following services (for an extra fee):				
t is your BETU	6. Signature: (Addressee or Agent)  X B PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.	8. Addressee and fee is and fee is and fee is and fee is 4a. Article 4a. Article 4b. Service Registe Express Return R	Domestic Return Receipt  I also wish to receive the following services (for an extra fee):				
t is your BETU	6. Signature: (Addressee or Agent)  X B PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.	8. Addressee and fee is and fee is and fee is and fee is 4a. Article 4a. Article 4b. Service Registe Express	Domestic Return Receipt  I also wish to receive the following services (for an extra fee):				
t is your BETU	6. Signature: (Addressee or Agent)  X B PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.	8. Addressee and fee is and the date 4a. Article 4b. Service Registe Express Return R 7. Date of I	Domestic Return Receipt  I also wish to receive the following services (for an extra fee):				
t is your BETU	6. Signature: (Addressee or Agent)  X B PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.	8. Addressee and fee is and the date 4a. Article 4b. Service Registe Express Return R 7. Date of I	Domestic Return Receipt  I also wish to receive the following services (for an extra fee):				
+ Is your BETU	6. Signature: (Addressee or Agent)  X B PS Form 3811, December 1994  SENDER:  Complete items 1 and/or 2 for additional services.  Complete items 3, 4a, and 4b.	8. Addresses and fee is and fee i	Domestic Return Receipt  I also wish to receive the following services (for an extra fee):	4			

Domestic Return Receipt

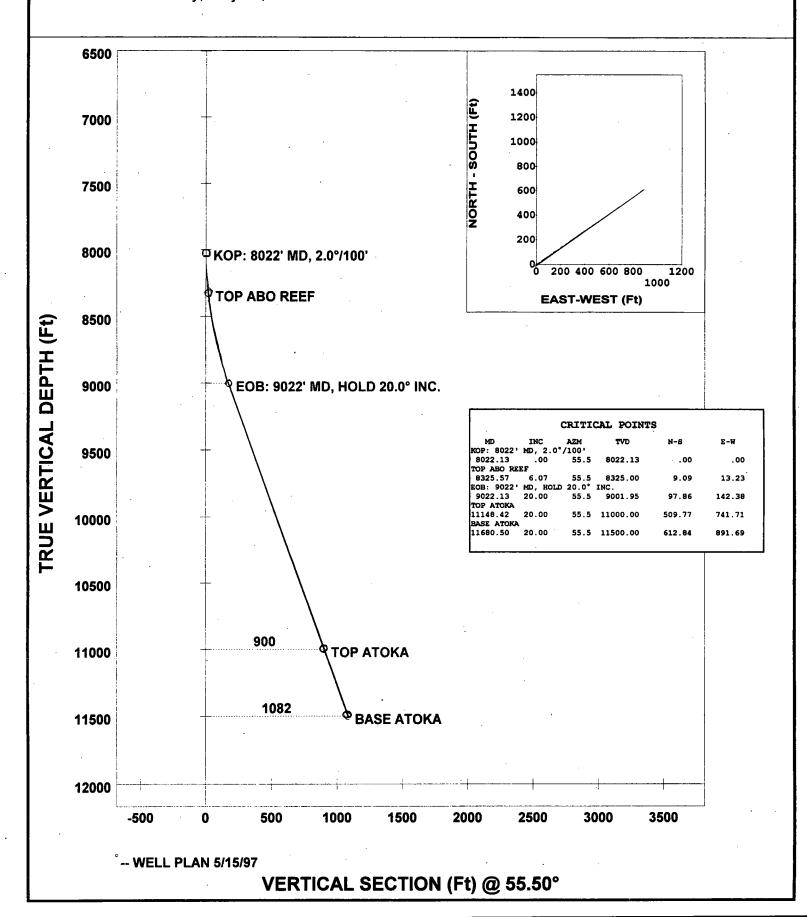
PS Form 3811, December 1994

Domestic Return Receipt

Company: TEXACO E & P, INC. Lease/Well: NM STATE AN #11

Location: LEA CO., NM

Declination: File name: C:\WINSERVE\NMAN11.SVY Date/Time: Thursday, May 15, 1997





Job Number: P97-224

Company: TEXACO E & P, INC.

Lease/Well: NM STATE AN #11

Location: LEA CO., NM

Rig Name: RKB:

G.L. or M.S.L.:

State/Country:

**Declination:** 

Grid:

File name: C:\WINSERVE\NMAN11.SVY

Date/Time: 15-May-97 / 18:09

Curve Name: WELL PLAN 5/15/97

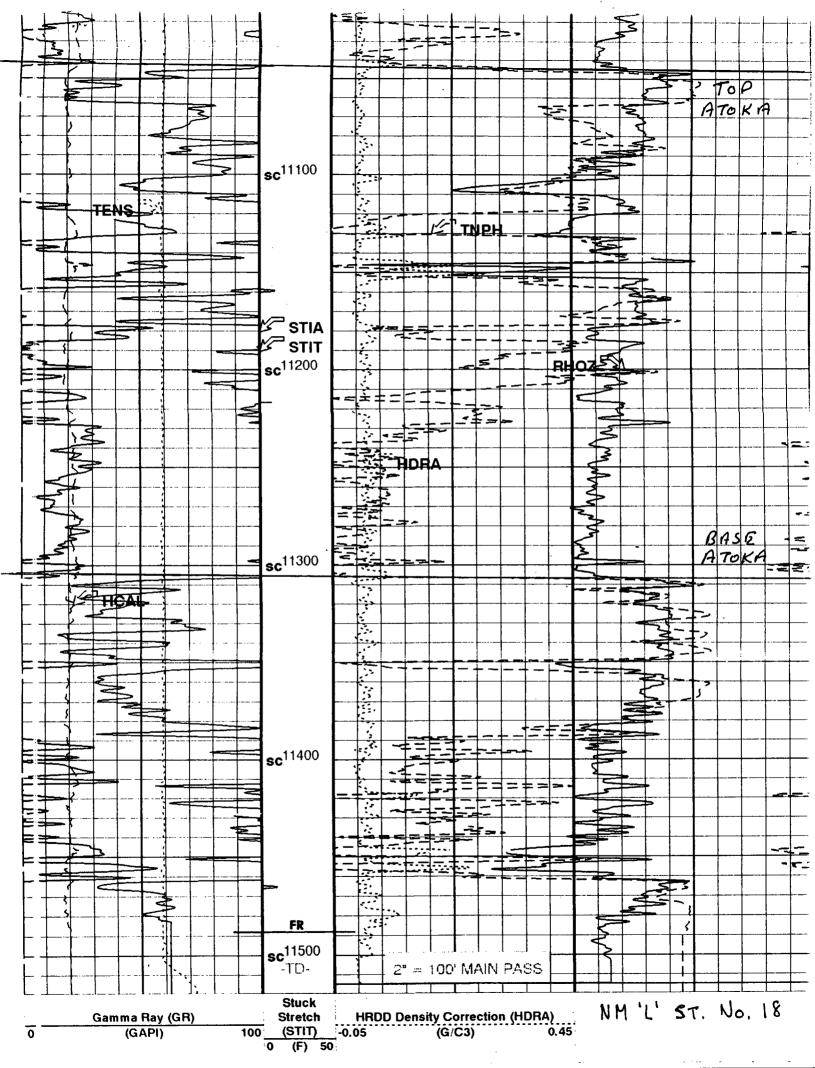
## PHOENIX DRILLING SERVICES, INC.

## WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method Vertical Section Plane 55.50

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Subsea TVD FT	N-S FT	E-W FT	Vertical Section FT	CLOS Distance FT	URE Direction Deg	Dogleg Severity Deg/100
KOP: 80	)22' MC	), 2.0°/100	)'				<del></del>	· · · · · · · · · · · · · · · · · · ·	<del></del>	<del></del>
8022.13	.00	55.50	8022.13	4032.13	.00	.00	.00	.00	.00	.00
8072.13	1.00	55.50	8072.13	4082.13	.25	.36	.44	.44	55.50	2.00
8122.13	2.00	55.50	8122.11	4132.11	.99	1.44	1.75	1.75	55.50	2.00
8172.13	3.00	55.50	8172.06	4182.06	2.22	3.24	3.93	3.93	55.50	2.00
8222.13	4.00	55.50	8221.97	4231.97	3.95	5.75	6.98	6.98	55.50	2.00
8272.13	5.00	55.50	8271.81	4281.81	6.17	8.98	10.90	10.90	55.50	2.00
8322.13	6.00	55.50	8321.58	4331.58	8.89	12.93	15.69	15.69	55.50	2.00
TOP AE	O REE	F			************					
8325.57	6.07	55.50	8325.00	4335.00	9.09	13.23	16.05	16.05	55.50	2.00
8372.13	7.00	55.50	8371.26	4381.26	12.09	17.60	21.35	21.35	55.50	2.00
8422.13	8.00		8420.83	4430.83	15.79	22.98	27.88	27.88	55.50	2.00
8472.13	9.00	55.50	8470.28	4480.28	19.98	29.07	35.27	35.27	55.50	2.00
8522.13	10.00	55.50	8519.60	4529.60	24.65	35.87	43.52	43.52	55.50	2.00
8572.13	11.00	55.50	8568.76	4578.76	29.81	43.38	52.63	52.63	55.50	2.00
8622.13	12.00	55.50	8617.75	4627.75	35.46	51.59	62.60	62.60	55.50	2.00
8672.13	13.00	55.50	8666.57	4676.57	41.59	60.51	73.42	73.42	55.50	2.00
8722.13	14.00	55.50	8715.19	4725.19	48.20	70.13	85.10	85.10	55.50	2.00
8772.13	15.00	. 55.50	8763.59	4773.59	55.29	80.45	97.62	97.62	55.50	2.00
8822.13	16.00	55.50	8811.77	4821.77	62.86	91.46	110.98	110.98	55.50	2.00
8872.13	17.00	55.50	8859.71	4869.71	70.90	103.16	125.18	125.18	55.50	2.00
8922.13	18.00	55.50	8907.40	4917.40	79.42	115.55	140.21	140.21	55.50	2.00
8972.13	19.00	55.50	8954.81	4964.81	88.40	128.63	156.08	156.08	55.50	2.00
<del></del>		), HOLD 2		· · - · ·						
9022.13	20,00	•	9001.95	5011.95	97.86	142.38	172.77	172.77	55.50	2.00
9122.13	20.00	55.50	9095.92	5105.92	117.23	170.57	206.97	206.97	55.50	.00

Measured Depth FT	inci Angle Deg	Drift Direction Deg	True n Vertical Depth	Subsea TVD FT	N-S FT	E-W FT	Vertical Section FT	C L O S Distance FT	URE Direction Deg	Dogleg Severity Deg/100
9222.13	20.00	55.50	9189.88	5199.88	136.60	198.76	241.17	241.17	55.50	.00
9322.13	20.00	55.50	9283.85	5293.85	155.97	226.94	275.37	275.37	55.50	.00
9422.13	20.00	55.50	9377.82	5387.82	175.35	255.13	309.58	309.58	55.50	.00
9522.13	20.00	55.50	9471.79	5481.79	194.72	283.32	343.78	343.78	55.50	.00
9622.13	20.00	55.50	9565.76	5575.76	214.09	311.50	377.98	377.98	55.50	.00
9722.13	20.00	55.50	9659.73	5669.73	233.46	339.69	412.18	412.18	55.50	.00
9822.13	20.00	55.50	9753.70	5763.70	252.83	367.88	446.38	446.38	55.50	.00
9922.13	20.00	55.50	9847.67	5857.67	272.21	396.06	480.59	480.59	55.50	.00
10022.13	20.00	55.50	9941.64	5951.64	291.58	424.25	514.79	514.79	55.50	.00
10122.13	20.00	55.50	10035.61	6045.61	310.95	452.44	548.99	548.99	55.50	.00
10222.13	20.00	55.50	10129.58	6139.58	330.32	480.62	583.19	583.19	55.50	.00
10322.13	20.00	55.50	10223.55	6233.55	349.70	508.81	617.39	617.39	55.50	.00
10422.13	20.00	55.50	10317.52	6327.52	369.07	537.00	651.60	651.60	55.50	.00
10522.13	20.00	55.50	10411.49	6421.49	388.44	565.18	685.80	685.80	55.50	.00
10622.13	20.00	55.50	10505.45	6515.45	407.81	593.37	720.00	720.00	55.50	.00
10722.13	20.00	55.50	10599.42	6609.42	427.18	621.56	754,20	754.20	55.50	.00
10822.13	20.00		10693.39	6703.39	446.56	649.74	788.40	788.40	55.50	.00
10922.13	20.00		10787.36	6797.36	465.93	677.93	822.61	822.61	55.50	.00
11022.13	20.00		10881.33	6891.33	485.30	706.12	856.81	856.81	55.50	.00
11122.13	20.00	55.50	10975.30	6985.30	504.67	734.30	891.01	891.01	55.50	.00
TOP AT	OKA						·		<del></del>	
11148.42	20.00	55.50	11000.00	7010.00	509.77	741.71	900.00	900.00	55.50	.00
11248.42	20.00		11093.97	7103.97	529.14	769.90	934.20	934.20	55.50	.00
11348.42	20.00		11187.94	7197.94	548.51	798.09	968.40	968.40	55.50	.00
11448.42	20.00		11281.91	7291.91	567.88	826.27	1002.61	1002.61	55.50	.00
11548.42	20.00	55.50	11375.88	7385.88	587.25	854.46	1036.81	1036.81	55.50	.00
11648.42	20.00	55.50	11469.85	7479.85	606.63	882.65	1071.01	1071.01	55.50	.00
BASE A	TOKA				-				,	
11680.50	20.00	55.50	11500.00	7510.00	612.84	891.69	1081.99	1081.99	55.50	.00



## STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 11762 Order No. R-10817

APPLICATION OF THE OIL CONSERVATION DIVISION FOR AN ORDER AMENDING RULE 111 OF ITS GENERAL RULES AND REGULATIONS PERTAINING TO DEVIATED AND DIRECTIONAL WELLS.

## ORDER OF THE COMMISSION

## BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on April 10, 1997 and on June 5, 1997, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 14th day of July, 1997, the Commission, a quorum being present, having considered the record and being fully advised in the premises,

## FINDS THAT:

- (1) Due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) The New Mexico Oil Conservation Division ("Division") Rule 111 lists the requirements for wellbore deviation tests and for the drilling of deviated and directional wells.
- (3) The Division initiated a "Work Group" to study the existing Rule 111, define problems with the current regulatory procedures, and to develop improvements where needed. This Work Group consisted of four industry representatives: (i) C. Wade Howard with Texaco Exploration and Production, Inc. of Midland, Texas; (ii) Donna Williams with Burlington Resources Oil & Gas Company of Midland, Texas; (iii) Richard E. Foppiano with OXY USA, Inc. of Midland, Texas; (iv) George Sharp with Merrion Oil and Gas Corporation in Farmington, New Mexico; and, one Division representative from the Santa Fe office of the Division. The Work Group initially met on September 30, 1996 and subsequently worked together on a regular basis through meetings, telephone conference calls, electronic media and written communications. On December 2, 1996 a meeting with the Division District Supervisors was held in Santa Fe for their participation, suggestions, and assistance.

## (4) The Work Group determined that:

- (a) the current process for permitting horizontal and directional wells is more difficult than need be in that even though the bottomhole location is orthodox, an operator is still required to file a formal application, give notice to offset operators or interest owners, and wait a minimum of 20 days for a formal order; and
- (b) the requirements for vertical wells with an excessive deviation are unclear in that when the deviation exceeds the five degrees per 500 foot rule, operators are confused if a directional survey will be required, or what happens after the directional survey results are known.

## With this understanding the Work Group set out to:

- (a) minimize the regulatory burdens for drilling orthodox directional and horizontal wells;
- (b) utilize existing rules and procedures when necessary so as to ensure the protection of correlative rights;
- (c) clarify the requirements for vertical wells with excessive deviation;
- (d) simplify the process.
- (5) The Division and the Work Group now recommend, based on their knowledge and experience, that Rule 111 be amended to reflect the following listed changes which are deemed desirable by the Division and the industry:

## (a) General:

- i) expand the definition of a "project area" to include secondary recovery projects, and allow for project areas to be designated on the OCD Form C-102 for approval by the Districts;
- ii) specify quality control measures for all directional surveys, such as minimum shot-point spacing and OCD approval of the surveying company.

## (b) Vertical Wells:

- i) specify that a directional survey will be required for a vertical well with excessive deviation if the maximum horizontal displacement calculation reveals a possibility that the wellbore is outside the unit boundaries;
- ii) stipulate that a vertical well will be considered unorthodox when a required directional survey shows a proposed producing interval more than 50 feet from the surface location and encroaching on the outer boundary of the applicable unit;
- iii) delete the formal application process for OCD approval of intentional deviations of vertical wells.

## (c) Directional and Horizontal Wells:

- i) eliminate the formal application process for orthodox producing intervals on directional and horizontal wellbores, and allow the Division's District Offices to process these requests;
- ii) clarify that the producing interval of a horizontal or directional well must be inside of the producing area, or it must be permitted as an unorthodox location under Rule 104(F)(3);
- iii) require that the producing interval of a horizontal or directional wellbore actually develop or traverse each proration unit in a project area consisting of multiple proration units in order to be eligible for multiple allowable.
- (6) At the time of the hearing Enron Oil & Gas Company ("Enron") appeared and, although not objecting to the Work Group's recommendations, presented an additional recommendation to expand the possible usage of existing wellbores for the drilling of horizontal drainholes or laterals.
- (7) Subsequent to the April 10, 1997 Commission hearing, the Work Group resubmitted for the Commission's consideration additional changes that: (i) address Enron's concerns and (ii) require that copies of drilling applications, where a combination of drilling units includes State and/or Federal lands, be sent to the New Mexico State Land Office and/or the U. S. Bureau of Land Management.

- (8) The adoption of the amendments to Rule 111 set forth in Exhibit "A" will provide the oil and gas industry a more flexible method for the timely and efficient processing of these types of requests while still providing for the orderly and proper regulation of oil and gas development to protect correlative rights and prevent waste.
- (9) The Commission's findings set forth in this order summarizes its reasons for its adoption of the changes to Rule 111 set forth in Exhibit "A".
- (10) This case should be reopened at a Division Examiner's Hearing in June 1999, at which time operators, oil and gas interest owners, the Work Group, District Supervisors, or any interested party may appear and present evidence as to the applicability and workability of these rule revisions. At that time, the Division should review the need and/or address any recommendations for additional amendments to Rule 111.

## IT IS THEREFORE ORDERED THAT:

- (1) Division Rule 111 is hereby amended as shown by the changes in the attached Exhibit "A" and said amended rule is adopted as shown in the attached Exhibit "B".
- (2) Rule 111 as amended shall be effective as of the date published in the New Mexico Register.
- (3) This case shall be reopened at a Division Examiner's Hearing in June 1999, at which time operators, oil and gas interest owners, the Work Group, District Supervisors, or any interested party may appear and present evidence to the applicability and workability of these rule revisions. At that time, the Division shall review the need and/or address any recommendations for additional amendments to Rule 111.
- (4) Jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JAMI BAILEY, Member

Bill Wein

WILLIAM W. WEISS, Member

WILLIAM J LEMAY, Chairman

SEAL

# Exhibit "A" Case No. 11762 Order No. R-10817

RULE 111 - DEVIATION TESTS ( /DEVIATED WELLS) AND DIRECTIONAL WELLS

- 111.A. Definitions: The following definitions shall apply to this Rule only:
- (1) [(10+)] Azimuth [means] the deviation in the horizontal plane of a wellbore expressed in terms of compass degrees.
- (2) (\(\frac{41}{1}\)\) Deviated Well [means] any wellbore which is intentionally deviated from vertical but not with an intentional azimuth. Any deviated well is subject to Rule 111\_B (-B-and-C).
- (3) ((2)) Directional Well (means) a wellbore which is intentionally deviated from vertical with an intentional azimuth. Any directional well is subject to Rule 111\_C ((-1)).
- (4) [(11)] Kick-off Point [means] the point at which the wellbore is intentionally deviated from vertical.
- (5) [(14)] Lateral [means] any portion of a wellbore past the point where the wellbore has been intentionally departed from the vertical.
- (6) (49) Penetration Point [means] the point where the wellbore penetrates the top of the pool from which it is intended to produce.
- (7) [(8)] Producing Area [means all points that lie] the area that lies within [along] a [rectangular or square] window formed by plotting the measured distance from the North, South, East and West boundaries of a project area, inside of which a vertical wellbore can be drilled and produced in conformity with the setback requirements from the outer boundary of a standard spacing [and provention] unit for the applicable pool(s).

- (8) [(13)] Producing Interval [means] that portion of the wellbore drilled inside the vertical limits of a pool, between its penetration point and its terminus [and within the producing area].
- (9) [(7)] Project Area an area designated on Form C-102 (Well Location And Dedication Plat) that is enclosed by the outer boundaries of a spacing unit, a combination of complete spacing units, or an approved secondary, tertiary or pressure maintenance project [means one or more drilling units which are to be dedicated to the project well].
- (10) {(6)} Project Well [means] any well drilled, completed, produced or injected into as either a <u>vertical well</u>, deviated well or [as a] directional well.
- (11) ((4) Drilling) Spacing Unit (means) the (surface) acreage [assigned] that is dedicated to a [vertical-wellbore] well in accordance with [MMOCD] Rule 104. Included in this definition is a "unit of provation for oil or gas" as defined by the Division and all non-standard such units previously approved by the Division.
- (12) Terminus [means] the farthest point attained along the wellbore.
- (13) Unorthodox any part of the producing interval which is located outside of the producing area.
- (14) [(3)] Vertical Well [means] a well that does not have an intentional departure or course deviation from the vertical.
- (15) [(5)] Wellbore [means] the interior surface of a cased or open hole through which drilling, production, or injection operations are conducted.

## 111.B. <u>Deviated Wellbores:</u>

(1) Deviation Tests Required. [+] Any <u>vertical or deviated</u> well which is drilled or deepened shall be tested at reasonably frequent intervals to determine the deviation from the vertical. Such tests shall be made at least once each 500 feet or at the first bit change succeeding 500 feet. A tabulation of all deviation tests run, sworn to and notarized, shall be filed with Form C-104, Request for Allowable and Authorization to Transport Oil and Natural Gas.

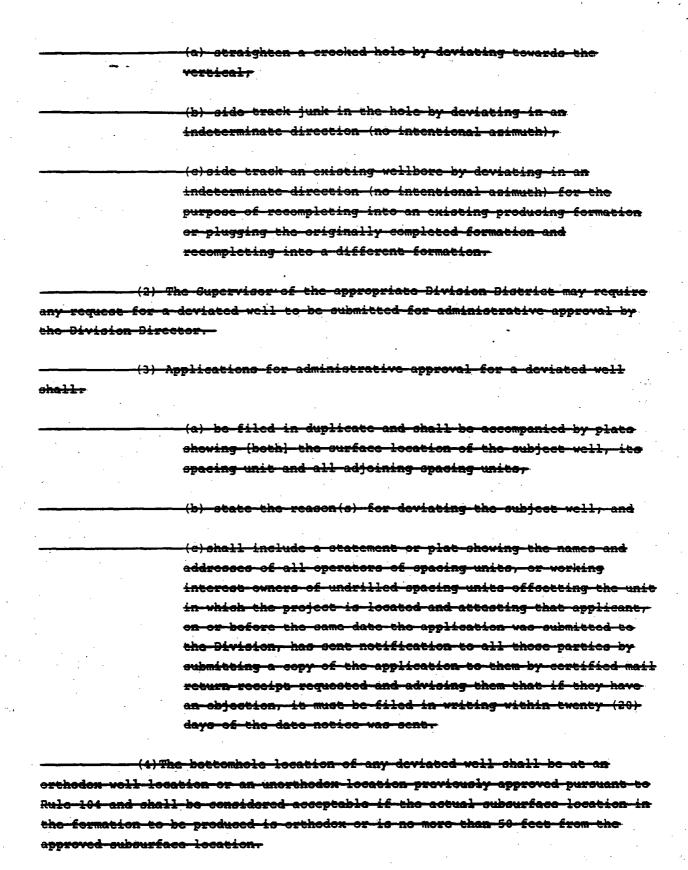
(2) Excessive Deviation. When the deviation averages more than five degrees in any 500-foot interval, the operator shall include the calculations of the maximum possible horizontal displacement of the hole. When the maximum possible horizontal displacement exceeds the distance to the nearest outer boundary line of the appropriate unit. [and] the operator [Division] shall run [may require that] a directional survey [be run] to establish the location of the producing interval(s).

(3)Unorthodox Locations. If the results of the directional survey indicate that the producing interval is more than 50 feet from the approved surface location and closer than the minimum setback requirements to the outer boundaries of the applicable unit. then the well shall be considered unorthodox. To obtain authority to produce such well, the operator shall file an application with the Division Director, copy to the appropriate Division District Office, and shall otherwise follow the normal process outlined in Rule 104 (F) (3) to obtain approval of the unorthodox location.

(4) Directional Survey Requirements. Upon request from the Division Director, any vertical or deviated well [which was deviated in an indeterminate direction or toward the vertical] shall be directionally surveyed. The appropriate Division District Office shall be notified of the approximate time any directional surveys are to be conducted. All directional surveys run on any well in any manner for any reason must be filed with the Division upon completion of the well. The Division shall not assign an allowable to the well until all such directional surveys have been filed.

[G. Deviated Wellberes:

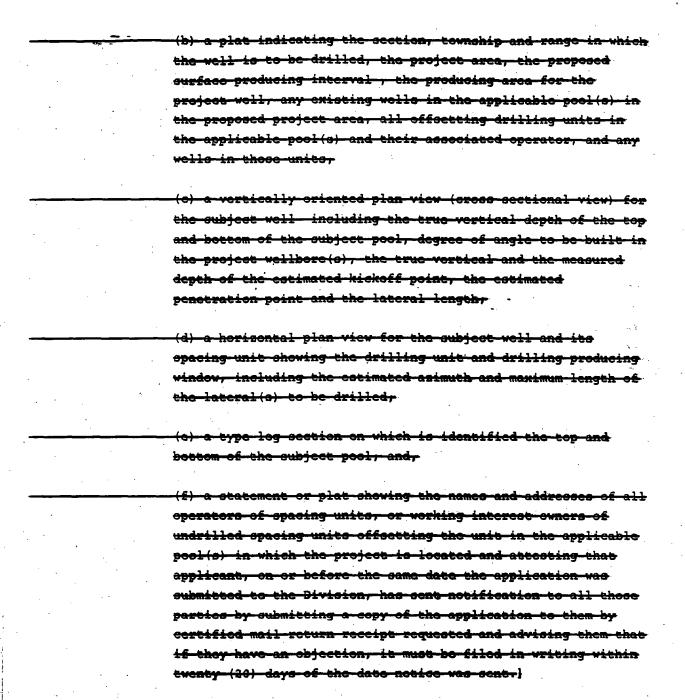
(1) The Supervisor of the appropriate Division District may approve the written request of an operator to drill a deviated wellbore or to deviate an existing wellbore to:



(5) The Division Director may approve the application for a deviated well upon receipt of waivers from all offset operators or owners of undrilled tracts or if no offset operator or owner has entered an objection to the project within 20 days after the application was received by the Director.]

## 111.C. [8] Directional Wellbore:

	(a) the curface location of the proposed or existing project
	well-is within-the-boundaries of the project area, consisting
	of-a-single or-multiple-drilling-unit(s), substantially in-the
	form of either a square or a rectangle, as applicable, being o
	legal subdivision of the U.S. Public Land Survey,
· 	(b) the producing interval of the wellbore(s) is totally
	confined to a producing area. The wellbore(s) may be
•	re criented to any asimuth based upon a change in conditions
	either geologic or mechanical, which is encountered either
	before or after the commencement of a project, but only
	insofar as the producing interval(s) remains totally confined
	to the producing area;
	(c) the project area includes either a single drilling unit or
	multiple contiguous drilling units; and,
····	(d) the project well includes either a single lateral or
	multiple-laterals which conform to conditions (a) and (b)
	above.
	(2) To obtain administrative approval to drill a directional well,
	t chall file a written application in duplicate with the Division



(1) Directional Drilling Within a Project Area. A permit to directionally drill a wellbore may be granted by the appropriate Division District Office if the producing interval is entirely within the producing area or at an unorthodox location previously approved by the Division. Additionally, if the project area consists of a combination of spacing units and includes any State or Federal acreage, a copy of the OCD Form C-102 shall be sent to the State Land Office or the Bureau of Land Management.

- (2) Unorthodox Wellbores. If all or part of the producing interval of any directional wellbore is projected to be outside of the producing area, the wellbore shall be considered unorthodox. To obtain approval for such wellbore, the applicant shall file a written application in duplicate with the Division Director, copy to the appropriate Division District Office, and shall otherwise follow the normal process outlined in Rule 104 (F) (3).
- (3) Allowables for Project Areas With Multiple Spacing Units. The maximum allowable assigned to the project area [when dealing with] within a prorated pool[s] shall be based upon the number of standard [provation] spacing units (or approved non-standard spacing [and provation] units) [for that pool any portion of which is within a distance of the producing lateral of the directional wellbore not greater than the footage setback distance for locating a vertical well-from the outer boundary of a spacing unit for that pool] that are developed or traversed by the producing interval of the directional wellbore or wellbores. Such maximum allowable shall be applicable to all production from the project area, including any vertical wellbores on standard spacing units inside the project area.
- (4) Directional Surveys Required. A directional survey shall be required on each well drilled under the provisions of this section. The appropriate Division District Office shall be notified of the approximate time all directional surveys are to be conducted. All directional surveys run on any well in any manner for any reason must be filed with the Division upon completion of the well. The Division shall not assign an allowable to the well until all such directional surveys have been filed. If the directional survey indicates that any part of the producing interval is outside of the producing area, or, in the case of an approved unorthodox location, less than the approved setback requirements from the outer boundary of the applicable unit, then the operator shall file an application with the Division Director, copy to the appropriate Division District Office, and shall otherwise follow the normal process outlined in Rule 104 (F) (3) to obtain approval of the unorthodox location.
- (5) Re-entry of Vertical or Deviated Wellbores for Directional Drilling Projects. These wellbores shall be considered orthodox provided the surface location is orthodox and the location of producing interval is within the tolerance allowed for deviated wellbores under Rule 111.B. (3).

#### [8. - Requirements/Conditions of Administrative Approval.

- (1) The Division Director may approve the application upon receipt of vaivers from all offset operators or owners of undrilled tracts or if no offset operator or owner has entered an objection to the project within 20 days after the application was received by the Director.
- (2) Any order issued by the Director approving an application for a directional wellbore shall require that:
  - (a) the applicant shall conduct a directional survey on the wellbore after directional drilling operations in order that the direction, extent and terminus of said wellbore may be determined to be in compliance with the provision of any order with copies submitted to the Santa Fe NHOGD and to the NHOCD district office in which the well is located, and,
  - (b) the Supervisor of the appropriate Division District shall be notified of the approximate time all directional surveys are to be conducted. All directional surveys run on any well in any manner for any reason must be filed with the Division upon completion of the well. The Division shall not assign an allowable to a well until the operator has submitted an affidavit that all such directional surveys have been filed.]

#### 111\_D [F]. Additional Matters:

- (1) The Division Director, at the request of an offset operator, may require any operator to make a directional survey of any well. The directional survey and all associated costs shall be at the expense of the requesting party and shall be secured in advance by a 45,000 indemnity bond posted with and approved by the Division. The requesting party may designate the well survey company and the survey may be witnessed by the Division and the operator.
- (1) Directional surveys required under the provisions of this rule shall have shot points no more than 200 feet apart and shall be run by competent surveying companies that are approved by the Division Director. Exceptions to the minimum shot point spacing will be allowed provided the accuracy of the survey is still within acceptable limits.

- (2) The Division Director, may, at his discretion, set any application for administrative approval [for public hearing.] whereby the operator shall submit appropriate information and give notice as requested by the Division Director. Unprotested applications may be approved administratively within 20 days of receipt of the application and supporting information. If the application is protested, or the Division Director decides that a public hearing is appropriate, the application may be set for public hearing.
- (3) Permission to deviate or directionally drill any wellbore for any reason or in any manner not provided for in this rule shall be granted only after notice and opportunity for hearing.

# Exhibit "B" Case No. 11762 Order No. R-10817

### RULE 111 - DEVIATION TESTS AND DIRECTIONAL WELLS

- 111.A. Definitions: The following definitions shall apply to this Rule only:
- (1) Azimuth the deviation in the horizontal plane of a wellbore expressed in terms of compass degrees.
- (2) Deviated Well any wellbore which is intentionally deviated from vertical but not with an intentional azimuth. Any deviated well is subject to Rule 111.B.
- (3) Directional Well a wellbore which is intentionally deviated from vertical with an intentional azimuth. Any directional well is subject to Rule 111.C.
- (4) Kick-off Point the point at which the wellbore is intentionally deviated from vertical.
- (5) Lateral any portion of a wellbore past the point where the wellbore has been intentionally departed from the vertical.
- (6) Penetration Point the point where the wellbore penetrates the top of the pool from which it is intended to produce.
- (7) Producing Area the area that lies within a window formed by plotting the measured distance from the North, South, East and West boundaries of a project area, inside of which a vertical wellbore can be drilled and produced in conformity with the setback requirements from the outer boundary of a standard spacing unit for the applicable pool(s).
- (8) Producing Interval that portion of the wellbore drilled inside the vertical limits of a pool, between its penetration point and its terminus.
- (9) Project Area an area designated on Form C-102 that is enclosed by the outer boundaries of a spacing unit, a combination of complete spacing units, or an approved secondary, tertiary or pressure maintenance project.

- (10) Project Well any well drilled, completed, produced or injected into as either a vertical well, deviated well or directional well.
- (11) Spacing Unit the acreage that is dedicated to a well in accordance with Rule 104. Included in this definition is a "unit of proration for oil or gas" as defined by the Division and all non-standard such units previously approved by the Division.
  - (12) Terminus the farthest point attained along the wellbore.
- (13) Unorthodox any part of the producing interval which is located outside of the producing area.
- (14) Vertical Well a well that does not have an intentional departure or course deviation from the vertical.
- (15) Wellbore the interior surface of a cased or open hole through which drilling, production, or injection operations are conducted.

#### 111.B. Deviated Wellbores:

- (1) Deviation Tests Required. Any vertical or deviated well which is drilled or deepened shall be tested at reasonably frequent intervals to determine the deviation from the vertical. Such tests shall be made at least once each 500 feet or at the first bit change succeeding 500 feet. A tabulation of all deviation tests run, sworn to and notarized, shall be filed with Form C-104, Request for Allowable and Authorization to Transport Oil and Natural Gas.
- (2) Excessive Deviation. When the deviation averages more than five degrees in any 500-foot interval, the operator shall include the calculations of the maximum possible horizontal displacement of the hole. When the maximum possible horizontal displacement exceeds the distance to the nearest outer boundary line of the appropriate unit, the operator shall run a directional survey to establish the location of the producing interval(s).
- (3) Unorthodox Locations. If the results of the directional survey indicate that the producing interval is more than 50 feet from the approved surface location and closer than the minimum setback requirements to the outer boundaries of the applicable unit, then the well shall be considered unorthodox. To obtain authority to produce such well, the operator shall file an application with the Division Director, copy to the appropriate Division District Office, and shall otherwise follow the normal process outlined in Rule 104 (F) (3) to obtain approval of the unorthodox location.

(4) Directional Survey Requirements. Upon request from the Division Director, any vertical or deviated well shall be directionally surveyed. The appropriate Division District Office shall be notified of the approximate time any directional surveys are to be conducted. All directional surveys run on any well in any manner for any reason must be filed with the Division upon completion of the well. The Division shall not assign an allowable to the well until all such directional surveys have been filed.

#### 111.C. Directional Wellbores:

- (1) Directional Drilling Within a Project Area. A permit to directionally drill a wellbore may be granted by the appropriate Division District Office if the producing interval is entirely within the producing area or at an unorthodox location previously approved by the Division. Additionally, if the project area consists of a combination of spacing units and includes any State or Federal acreage, a copy of the OCD Form C-102 shall be sent to the State Land Office or the Bureau of Land Management.
- (2) Unorthodox Wellbores. If all or part of the producing interval of any directional wellbore is projected to be outside of the producing area, the wellbore shall be considered unorthodox. To obtain approval for such wellbore, the applicant shall file a written application in duplicate with the Division Director, copy to the appropriate Division District Office, and shall otherwise follow the normal process outlined in Rule 104 (F) (3).
- (3) Allowables for Project Areas With Multiple Spacing Units. The maximum allowable assigned to the project area within a prorated pool shall be based upon the number of standard spacing units (or approved non-standard spacing units) that are developed or traversed by the producing interval of the directional wellbore or wellbores. Such maximum allowable shall be applicable to all production from the project area, including any vertical wellbores on standard spacing units inside the project area.
- each well drilled under the provisions of this section. The appropriate Division District Office shall be notified of the approximate time all directional surveys are to be conducted. All directional surveys run on any well in any manner for any reason must be filed with the Division upon completion of the well. The Division shall not assign an allowable to the well until all such directional surveys have been filed. If the directional survey indicates that any part of the producing interval is outside of the producing area, or, in the case of an approved unorthodox location, less than the approved setback requirements from the outer boundary of the applicable unit, then the operator shall file an application with the Division Director, copy to the appropriate Division District Office, and shall otherwise follow the normal process outlined in Rule 104 (F) (3) to obtain approval of the unorthodox location.

(5) Re-entry of Vertical or Deviated Wellbores for Directional Drilling Projects. These wellbores shall be considered orthodox provided the surface location is orthodox and the location of producing interval is within the tolerance allowed for deviated wellbores under Rule 111.B.(3).

#### 111.D. Additional Matters:

- (1) Directional surveys required under the provisions of this rule shall have shot points no more than 200 feet apart and shall be run by competent surveying companies that are approved by the Division Director. Exceptions to the minimum shot point spacing will be allowed provided the accuracy of the survey is still within acceptable limits.
- (2) The Division Director, may, at his discretion, set any application for administrative approval whereby the operator shall submit appropriate information and give notice as requested by the Division Director. Unprotested applications may be approved administratively within 20 days of receipt of the application and supporting information. If the application is protested, or the Division Director decides that a public hearing is appropriate, the application may be set for public hearing.
- (3) Permission to deviate or directionally drill any wellbore for any reason or in any manner not provided for in this rule shall be granted only after notice and opportunity for hearing.

#### : DISTRICT I

P.O: 85% 1980, Hobbs, NM 88241-1980

DISTRICT II

P.O. Box Drawer DD, Artesia, NM 88211-0719

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

7/14/97

Telephone

688-4606

Attached

Date

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-101 Revised February 10,1994

Instructions on back

Submit to Appropriate District Office

State Lease - 6 Copies

## **OIL CONSERVATION DIVISION**

P.O. Box 2088

in propagation was the

P.O. Box 208					MIT 1	O DRILL, RE-I					OR A	ADD A Z	MEND	ED REPORT	
			•	erator Name a	and Ad	dress								ID Number	
TEXACO EX	PLORATIO	)N & F	PRODUC	CTION INC.										2351	
P.O. Box 310	09, Midland	Texa	s 79702	!								30-6	3 API Ni D Z S	1 34097	
<sup>4</sup> P	roperty Code	ð					roperty N						<sup>6</sup> W	ell No.	
·	11093					•	e Loca	-		<u>-</u>				11	
UI or lot no.	Section	Tov	wnship	Range	Lot.	1	<del></del>	_	th/South Line	Feet From T	he	East/Wes	at Line	County	
В	7		18-S	35-E		900		••••	NORTH	1440		EAS		LEA	
				<sup>8</sup> Propos	sed B	ottom Hole Loc	cation I	lf D	ifferent Fron	n Surface					
Ui or lot no.			wnship			dn Feet From			Feet From The		East/West Line		County		
A	7		18-S	35-E		400			NORTH	500		EAS	T	LEA	
			Proposec WILDCAT	d Pool 1 r, ATOKA						<sup>10</sup> Propose VACUUM,					
						19			14						
1	: Type Code N		12 WellType Code O			Rotary o		C.T. Lease-1		se Type Code S	Į.		<sup>15</sup> Ground Level Elevation 3969'		
18 Mult	iple		1	<sup>7</sup> Proposed De	pth	<sup>18</sup> Format	ion	18 Contr		ontractor			<sup>20</sup> Spud Date		
N	lo			11681'		ATOKA / AB	O REEF	REEF NABO							
				2	Pro	oposed Casing	and C	em	ent Progran	n					
SIZE OF	HOLE	Τ	SIZE OF	CASING	W	EIGHT PER FOOT		SET	TING DEPTH	SAC	(S OF	CEMENT		EST. TOP	
14 3/4		11 3	3/4		42#		600	,		450 SA	CKS		SURF	ACE	
11		8 5/			24#	<del></del>	350	0'		1000 S			SURF	ACE	
7 7/8		5 1/	2		17#		116	81'		2100 S	ACKS		3400'		
ļ		┼			<del> </del>		-					•	-		
- Describe the			والمحمد حاجات		~ DI	.UG BACK give the data	an the pr				نومر راسم				
Describe the CEMENTING SURFACE C CF/S, 6.3 GV INTERMEDI PPG, 1.19 C PRODUCTION DV TOOL  H w/ 2% GE	blowout preve G PROGRA (ASING: 28 N/S) ATE CASIN F/S, 5.2 GV ON CASINC (6900': 2nk L, 5% SALT	ntion pr IM; 50 SA( NG: 8( V/S). S: 1st I STG I, 1/4#	rogram, if a CKS CL 300 SACH 3 STG - 1 3 - 600 S 4 FC (14	any. Uso addition ASS C w/ 4% KS 35/65 POZ 1300 SACKS ACKS 35/65 1.2 PPG, 1.35	GEL, Z H w/ 50/50 POZ H i CF/S,	ts if nocessary.  2% CC (13.5 PPC  6% GEL, 5% SAL*  POZ H w/ 2% GEL  1 w/ 6% GEL, 5% S	3, 1.74 C T, 1/4# F ., 5% SA SALT, 1/4	FC ( LT, 4# F	5, 9.1 GW/S). F 12.4 PPG, 2.14 1/4# FC (14.2 FC (12.4 PPG, :	/B 200 SACK I CF/S, 11.9 G PPG, 1.35 CF	S CLA (W/S). (/S, 6.3 .9 GW	SS C w/ 2 F/B 200 S 3 GW/S). F/B 2	SACKS (	CLASS H (15. 6 KS 50/50 POZ	
Division hav	e been complik	ed with	and that ti	e of the Oil Cons the information gi vledge and belief.	iven abo				OIL (	CONSER	VAT	ION D	IVISIO	N	
Signature	<	W.	'skoi	House	L		Арр	rov	ed By:	ris U	24	lism	<u> </u>	·	
Printed Name	e C.	Wade	Howard	l 			Titt		DESTRACT						
Title Fo	n Accictant	,					Anı	orov	ral Date: AUB	14 1997	FHY	VISORE Vinitation D	ate		

Conditions of Approval: Vector oppositions

CMD : OG5SECT

ORYX ENERGY CO

PF02

PF08 FWD

R

A

PF01 HELP

PF07 BKWD

# ONGARD INQUIRE LAND BY SECTION

08/27/97 17:49:53 OGOMES -EME3

TEXACO EXPLORATIO

R

PF06

PF12

A

PAGE NO: 1

Sec : 07 Twp : 18S Rng : 35E Section Type : NORMAL

1 37.72 CS B01306 2 11/42 TEXACO EXPLORATIO U R P A A	C 40.00 CS B01306 2 11/42 TEXACO EXPLORATIO U R A A	B 40.00 CS E07653 3 12/63 TEXACO EXPLORATIO U R A A A	A 40.00 CS E07653 3 12/63 TEXACO EXPLORATIO R
2 37.80 CS E06002 3 02/62 TOREADOR ROYALTY U R A P	F 40.00 CS E06002 3 02/62 TOREADOR ROYALTY U R A A	G 40.00 CS E07653 3 12/63 TEXACO EXPLORATIO R	H 40.00 CS E07653 3 12/63 TEXACO EXPLORATIO R
			·
PF07 BKWD PF08 FWI			
PF07 BKWD PF08 FWI  CMD : OG5SECT  Sec : 07 Twp : 18S  3 37.88	O PF09 PRINT PI ONGARD INQUIRE LAND I Rng : 35E Section  K 40.00	F10 SDIV PF11  BY SECTION  Type : NORMAL  J 40.00	PF12  08/27/97 18:11:44  OGOMES -EME3  PAGE NO: 2
PF07 BKWD PF08 FWI  CMD: OG5SECT  Sec: 07 Twp: 18S	O PF09 PRINT PI ONGARD INQUIRE LAND I Rng: 35E Section	F10 SDIV PF11  BY SECTION  Type : NORMAL	PF12 08/27/97 18:11:44 OGOMES -EME3 PAGE NO: 2

TEXACO EXPLORATIO

PF05

PF11

R

A

PF03 EXIT PF04 GoTo

PF09 PRINT PF10 SDIV

YATES PETROLEUM C

R

CMD : -OG6C101 **ONGARD** 

C101-APPLICATION FOR PERMIT TO DRILL

09/12/97 16:09:16 OGOMES -EMF3

OGRID Idn

: 22351 API Well No: 30 25 34097 APD Status(A/C/P): A

Opr Name,

Addr: TEXACO EXPLORATION & PRODUCTION Aprvl/Cncl Date : 08-14-1997

205 EAST BENDER HOBBS, NM 88240

11093 **STATE AN** Prop Idn:

Well No:

U/L Sec Township Range Lot Idn North/South East/West

\_\_\_\_\_

FTG 900 F N FTG 1440 F E 18S 35E

Surface Locn: B 7 18S 35E OCD U/L: B API County: 25

Work typ (N/E/D/P/A) : N Well typ (O/G/M/I/S/W/C) : O Cable/Rotary (C/R) : R

Lease typ (F/S/P/N/J/U/I): S Ground Level Elevation: 3969

State Lease No: Multiple Comp (Y/N) : S

Prpsd Depth : 11681 Prpsd Frmtn : ATOKA

E0009: Enter data to modify record

PF04 GoTo PF05 PF06 PF10 C102 PF11 HISTORY PF12 PF01 HELP PF02 PF03 EXIT PF04 GoTo PF06 CONFIRM

PF07 PF08 PF09 PRINT from the East line (Unit B) of said Section 7 by drilling vertically to an approximate depth of 8,000 feet (the top of the Abo Reef within said well is expected to be at approximately 8326 feet), kick-off in a east-northeasterly direction building angle at a rate of 2 degrees per 100 feet until an inclination of 20 degrees is obtained, and drill directionally at a 20 degree angle to a targeted standard bottomhole oil well location within the Atoka formation that is approximately 400 feet from the North line and 500 feet from the East line (Unit A) of said Section 7;

- (8) The "project area" within the Undesignated Vacuum-Atoka Pool proposed by Texaco would consist of a single standard 40-acre oil spacing and proration unit comprising the NW/4 NE/4 of said Section 7 and the applicable drilling window or "producing area" for said wellbore should include that area within the NW/4 NE/4 (Unit A) of said Section 7 that is no closer than 330 feet to the outer boundary of said dedicated 40-acre tract; and,
- (9) It appearing the applicant has satisfied all of the appropriate requirements prescribed in said Rule 111.D and E and 104.F(2), the subject application should be approved and the well should be governed by the provisions contained within this order and all other applicable provisions of Division General Rule 111.

## IT IS THEREFORE ORDERED THAT:

(1) Texaco Exploration and Production, Inc. ("Texaco") is hereby authorized to drill its proposed State "AN" Well No. 11 (API No. 30-025-34097) at an unorthodox surface oil well location 900 feet from the North line and 1440 feet from the East line (Unit B) of Section 7, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico, drill vertically to an approximate depth of 8,000 feet, kick-off in a east-northeasterly direction building angle at a rate of 2 degrees per 100 feet until an inclination of 20 degrees is obtained, penetrating the Abo Reef interval at an approximate 8326 feet, and continue to drill directionally to a targeted standard bottomhole oil well location within the Atoka formation that is approximately 400 feet from the North line and 500 feet from the East line (Unit A) of said Section 7.

PROVIDED HOWEVER THAT prior to commencing directional drilling operations in said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

<u>PROVIDED FURTHER THAT</u> during or upon completion of said directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

(2) The applicant shall notify the supervisor of the Hobbs District office of the Division of the date and time said wellbore surveys are to be conducted so that they may be